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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/635,561 | 08/10/2000 | Shinsuke Yokokawa | Q60393 | 6018 |

7590 08/21/2003

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2100 Pennsylvania Avenue NW
Washington, DC 20037-3213

EXAMINER

PHAM, THOMAS K

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2121

DATE MAILED: 08/21/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

2

Office Action Summary

Application No.

09/635,561

Applicant(s)

YOKOKAWA, SHINSUKE

Examiner

Thomas K Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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1. This action is in response to request for re-consideration filed on 6/17/03.
2. Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

DETAILED ACTION

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta et al. U.S. Patent 5,996,083 (hereinafter Gupta) in view of Hironari et al. Japan Patent no. 05-296098.
5. As for claim 1, Gupta shows a programmable controller for controlling a controlled apparatus by pulse output, comprising: a pulse generating section for outputting a pulse string having a set cycle, a pulse dividing section for dividing the pulse string output from said pulse generating section at a predetermined dividing ratio and for outputting an interruption request signal having a cycle which is n times as great as the cycle of the pulse string, where n is a positive integer (e.g. col. 6 lines 29-59 of Gupta); Gupta does not specifically show a central processing unit for executing an interruption processing in response to the interruption request signal output from said pulse dividing section so as to control the output of said pulse generating section. However, Hironari et al. shows a central processing unit for executing an interruption processing in response to the interruption request signal output from said pulse dividing section

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so as to control the output of said pulse generating section (page 2, paragraph 9 and page 4, paragraphs 24-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Hironari interrupt request signal with Gupta programmable controller because it would provide for saving power during system idle and at the same time extend the life of the CPU or CPUs.

6. As for claim 2, it is rejected applied above as in rejecting claim 1. Furthermore, Gupta shows a programmable controller wherein said central processing unit sets a dividing ratio to be used for division of the pulse dividing section, controls the number of pulses output from said pulse generating section (e.g. col. 7 lines 20-38 of Gupta). However, Gupta does not expressly show a programmable controller wherein said central processing unit sets the dividing ratio to be equal to the number of pulses which have not been output when the number of the pulses which are output is smaller than $2n$. Gupta shows available software programs can be use to set the dividing ratio values (e.g. col. 5 lines 60-64 of Gupta) to integer ratios (e.g. col. 6 lines 50-59 of Gupta) and could be adjust by software programs according to the designer (e.g. col. 7 lines 26-38 of Gupta). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide a software program that sets the dividing ratio equal to the number of pulses which have not been output when the number of the pulses which are output is smaller than $2n$, in order to conserve power during high-speed processing of a CPU.

7. As for claim 3, Gupta shows a programmable controller wherein said central processing unit changes the dividing ratio to be used for the division of said pulse dividing section depending on the cycle of the pulse string output from said pulse generating section (e.g. col. 7 lines 20-38 of Gupta).

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Response to Arguments

In the remark the applicant argues that cited reference fails to disclose:

I) “the interrupt request signal having a cycle which is n times as great as the cycle of the pulse string output from the pulse generating section”, as to claim 1.

In response to applicant’s argument,

I) It was noted that prior art (Hironari et al JPPN 05-296098) teaches an interruption processing in response to the interruption request signal output from said pulse dividing section so as to control the output of said pulse generating section (page 2, paragraph 9 and page 4, paragraphs 24-25). Thus, examiner believes that the interrupt request signal output has been stored as reference has suggested. Therefore, limitations are met by the reference.

Conclusion

8. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on July 23rd, 2003 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Corresponding Information

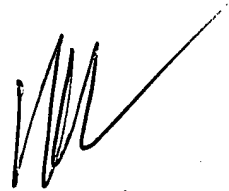
Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Thomas Pham; whose telephone number is (703) 305-7587 and fax number is (703) 746-8874. The examiner can normally be reached on Monday-Thursday and every other Friday from 7:30AM- 5:00PM EST or contact Supervisor, *Mr. Anil Khatri*, can be reached on (703) 305-0282.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Thomas Pham
Patent Examiner

TP

August 19, 2003


ANIL KHATRI
PRIMARY EXAMINER